

STATE OF MICHIGAN

DEPARTMENT OF NATURAL RESOURCES

WASTE MANAGEMENT OF MICHIGAN, INC.

TRI-CITY RECYCLING AND DISPOSAL FACILITY

TYPE OF FACILITY: TYPE II SANITARY LANDFILL

FACILITY ID 76-000013

SOLID WASTE DISPOSAL AREA CONSTRUCTION PERMIT

PERMIT No. 0298

This construction permit is issued under the provisions of the Solid Waste Management Act, 1978 P.A. 641, as amended, to permit the construction of a solid waste disposal area in the State of Michigan. This permit does not obviate the necessity of obtaining other clearances and permits as may be required by state law.

GRANTED TO: WASTE MANAGEMENT OF MICHIGAN, INC. COUNTY: SANILAC

ISSUE DATE: NOVEMBER 22, 1993

EXPIRATION DATE: One year from date of issue unless development of facility begins within the year.

FACILITY DESCRIPTION: The horizontal expansion of the existing Type II sanitary landfill, known as the Tri-City Recycling and Disposal Facility will permit a total of 195.4 acres located in the N 1/2, NW 1/4, Sec. 32, T12N, R15E, and S 1/2, NW 1/4, Sec. 32, Bridgehampton Township, Sanilac County, Michigan (Facility). The Facility is identified in Attachment A, and is fully described in the attached conditions.

RESPONSIBLE PARTY TO CONTACT: Mr. Larry O'Keefe
Waste Management of Michigan, Inc.
426 North Ruth Road
Carsonville, Michigan 48419
313-657-9313

The permit conditions and attachments are an enforceable part of this construction permit.

This permit is subject to revocation by the Director of the Department of Natural Resources for any violation of the law under which it is issued or for any violation of the rules authorized thereunder, or any conditions noted. This permit shall be available through the applicant during the entire effective date and remains the property of the Director of the Department of Natural Resources.

THIS PERMIT IS NOT TRANSFERABLE BY THE PERMITTEE.


RUSSELL J. HARDING, DEPUTY DIRECTOR



WASTE MANAGEMENT OF MICHIGAN, INC.
TRI-CITY RECYCLING & DISPOSAL FACILITY
SOLID WASTE DISPOSAL PERMIT NO. 0298
NOVEMBER 1993

CONDITIONS

1. The permittee shall comply with all terms and conditions of this permit and the provisions of the Solid Waste Management Act and its rules. This permit consists of the conditions contained herein, including the permit application and any attachments to this permit.
2. The permittee shall construct the Facility in a manner that will not violate any State or Federal law.
3. This permit authorizes the construction of the disposal area as defined in the Construction Permit Application for the Tri-City Recycling & Disposal Facility, signed by Mr. Larry O'Keefe, Division President, Waste Management of Michigan, Inc., dated July 26, 1993, and received by the Sanilac County Health Department on July 26, 1993 (hereinafter the "new disposal area"). The new disposal area authorized by this permit shall not be utilized for the disposal of solid waste until an operating license for the new disposal area is issued by the Director of the Michigan Department of Natural Resources (hereinafter the "Department").
4. The attached map (Attachment A) shows the Facility, the area permitted for construction, monitoring points (groundwater wells, piezometer, surface water, primary leachate storage points), site roads, and related appurtenances.
5. The issuance of this permit is based on the assumption that the information submitted in the Construction Permit Application dated July 26, 1993, received by the Sanilac County Health Department on July 26, 1993, and any subsequent amendments is accurate. Any inaccuracies or deviations found in this information may be grounds for the revocation or modification of this permit and/or other enforcement action. The permittee shall inform the Department's Waste Management Division, Saginaw/Bay District Supervisor of any known inaccuracies and/or any deviation in the information of the application which would affect the permittee's ability to comply with the applicable rules or permit conditions.
6. This permit is issued based on Department review of the Construction Permit Application for the Tri-City Recycling & Disposal Facility, signed by Mr. Larry O'Keefe, Division President, Waste Management of Michigan, Inc., and dated July 26, 1993. The application includes the following documents or their approved revisions which are incorporated by reference and become enforceable portions of this permit:

Waste Management of Michigan, Inc.
Tri-City Recycling & Disposal Facility
Solid Waste Disposal Permit No. 0298
November 1993
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- a. Construction Permit Application Form PR 5522 (REV. 12/65), dated July 26, 1993.
- b. Fee in the amount of \$675.00.
- c. Environmental Assessment titled, "Environmental Assessment Report", prepared by Golder Associates Inc. and dated July 1993.
- d. Hydrogeological Report titled, "Volume I & II, Hydrogeologic Study Report", prepared by Golder Associates Inc. and dated July 1993.
- e. Surface Water Monitoring Plan titled, "Environmental Monitoring Plan", prepared by Golder Associates Inc. and dated July 1993.
- f. Hydrogeological Monitoring Plan titled, "Environmental Monitoring Plan", prepared by Golder Associates Inc., and dated July 1993.
- g. Topographic Maps prepared by Rust Environment and Infrastructure and dated July 1993.
- h. Engineering Report titled, "Engineering Report for Tri-City Recycling and Disposal Facility, Lateral Expansion Construction Permit Application", prepared by Rust Environment and Infrastructure and dated July 1993.
- i. Engineering Plans titled, "Lateral Expansion Plans for Tri-City Recycling and Disposal Facility, Carsonville, Sanilac County, Michigan", prepared by Rust Environment and Infrastructure and dated July 1993.
- j. Operation Plans titled, "Engineering Report for Tri-City Recycling and Disposal Facility Lateral Expansion Construction Permit Application", prepared by Rust Environment and Infrastructure and dated July 1993.
- k. Construction Quality Assurance Plans titled, "Attachment D Quality Assurance/Quality Control Plan for Geomembrane Geotextiles and Geonets", prepared by QAM Liner Systems and dated April 21, 1993.
- l. Documentation of consistency with the Sanilac County Solid Waste Management Plan prepared by the Sanilac County Board of Commissioners and dated July 13, 1993.

- m. Revised Engineering Plans titled, "Lateral Expansion Plans for Tri-City Recycling and Disposal Facility, Carsonville, Sanilac County, Michigan", prepared by Rust Environment and Infrastructure and submitted November 1, 1993.
 - n. Revised Engineering Report titled, "Engineering Report Plans for Tri-City Recycling and Disposal Facility, Carsonville, Sanilac County, Michigan", prepared by Rust Environment and Infrastructure and submitted November 2, 1993.
 - o. Revised Hydrogeological Monitoring Plan titled, "Tri-City RDF Expansion - Proposed Monitoring System" contained in a letter to Department, from Waste Management, Inc. and submitted on November 4, 1993.
 - p. Revised Engineering Plan Drawing 7A titled, "Expansion Liner Grade and Leachate Collection Plan", prepared by Rust Environment and Infrastructure, revised and submitted on November 18, 1993.
7. Information in the permittee's hydrogeological report indicates that the natural soil barrier requirements of R 299.4422(2) will be met.

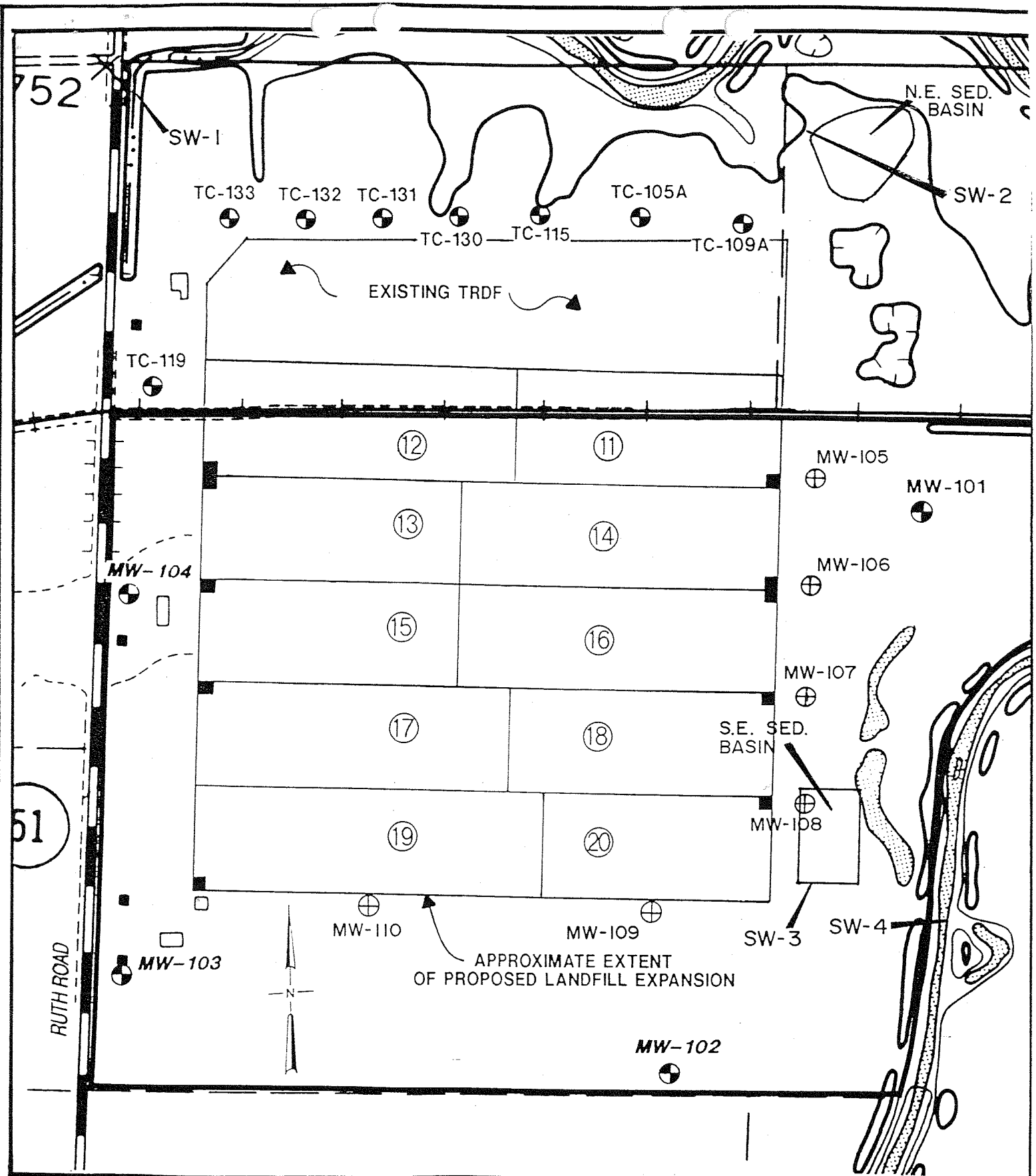
The permittee shall submit to the Department's Waste Management Division, Saginaw/Bay District a plan for each landfill unit to verify that the natural soil barrier requirements of R 299.4422(2) and R 299.4912 are met.

The permittee shall not initiate liner construction for any landfill unit until the Department has reviewed and approved the soil verification plan.

8. The required groundwater monitoring, surface water monitoring, and primary collection system (PCS) leachate sampling parameters and monitoring frequencies are outlined in the Hydrogeological Monitoring Plan as modified and are summarized in Attachment B.

All sampling results are to be submitted to the Waste Management Division, Saginaw/Bay District within 60 days of the end of the calendar quarter in which the samples were collected.

END OF CONDITIONS



LEGEND

MW-104
 ● EXISTING SURFICIAL MONITORING WELL
 ⊕ PROPOSED ADDITIONAL MONITORING WELL LOCATION
 MW-110
 SW-2 SURFACE WATER MONITORING LOCATION

■ PROPOSED LEACHATE SUMP LOCATION
 (20) LANDFILL CELL DESIGNATION

WASTE MANAGEMENT
 OF MICHIGAN, INC.
 TRI-CITY SOUTH EXPANSION

GROUNDWATER MONITORING WELLS			
A	S	Q	PARAMETER
		X	Static Water Levels (U.S.G.S.)
		X	pH (Field Measurement)
	X		Specific Conductance (Field Measurement)
	X		Temperature (Field Measurement)
			Aluminum (dissolved)
	X		Arsenic (dissolved)
	X		Antimony (dissolved)
	X		Barium (dissolved)
	X		Beryllium (dissolved)
			Boron - (dissolved)
	X		Cadmium (dissolved)
			Calcium (dissolved)
	X		Chromium (dissolved)
	X		Cobalt (dissolved)
	X		Copper (dissolved)
	X		Iron (dissolved)
	X		Lead (dissolved)
			Magnesium (dissolved)
			Manganese (dissolved)
			Mercury (dissolved)
	X		Nickel (dissolved)
			Phosphorus (dissolved)
			Potassium (dissolved)
	X		Selenium (dissolved)
	X		Silver (dissolved)
			Sodium (dissolved)
	X		Thallium (dissolved)
	X		Vanadium (dissolved)
	X		Zinc (dissolved)
	X		Total Inorganic Nitrogen
			Bicarbonate Alk. as HCO ₃
			Carbonate Alk.as CaCO ₃
	X		Chloride
			Cyanide
			Phenolics
	X		Sulfate
	X		Total Dissolved Solids
			Biochemical Oxygen Demand (BOD -5)
			Chemical Oxygen Demand (COD)
			Total Organic Carbon (TOC)
	X		Halogenated Volatile Organic Constituents
	X		Aromatic Volatile Organic Constituents
	X		Semivolatile Organic Constituents

SURFACE WATER MONITORING			
A	S	Q	PARAMETER
		X	pH (Field Measurement)
		X	Specific Conductance (Field Measurement)
		X	Temperature (Field Measurement)
			Aluminum (total)
			Antimony (total)
X			Arsenic (total)
			Barium (total)
			Beryllium (total)
			Boron - (total)
X			Cadmium (total)
			Calcium (total)
X			Chromium (total)
			Cobalt (total)
X			Copper (total)
			Iron (total)
X			Lead (total)
			Magnesium (total)
			Manganese (total)
X			Mercury (total)
X			Nickel (total)
		X	Phosphorus (total)
			Potassium (total)
X			Selenium (total)
X			Silver (total)
			Sodium (total)
			Thallium (total)
			Vanadium (total)
X			Zinc (total)
		X	Ammonia Nitrogen
		X	Nitrate Nitrogen + Nitrite Nitrogen
		X	Bicarbonate Alk. as HCO ₃
			Carbonate Alk.as CaCO ₃
		X	Chloride
X			Cyanide
		X	Phenolics
			Sulfate
		X	Total Suspended Solids
		X	Dissolved Oxygen (DO)-Field Measurement
		X	Biochemical Oxygen Demand (BOD-5)
		X	Chemical Oxygen Demand (COD)
		X	Total Organic Carbon (TOC)
		X	Total Dissolved Solids
		X	* Halogenated Volatile Organic Constituents
		X	* Aromatic Volatile Organic Constituents
		X	* Semivolatile Organic Constituents
* Organic Constituents at Sedimentation Basins Only			

A=ANNUAL S=SEMIANNUAL Q=QUARTERLY

[illegible]

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